DOCUMENT RESUME

ED 086 965 CS 000 909

AUTHOR Rosner, Jerome
TITLE Adopting Primary Grade Reading Instruction to Individual Differences in Perceptual Skills.
INSTITUTION Pittsburgh Univ., Pa. Learning Research and Development Center.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE Nov 73
NOTE 24p.; Paper presented at the Annual Meeting of the College Reading Association (17th, Silver Springs, Maryland, Nov. 1-3, 1973)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Decoding (Reading); *Perceptual Development; Primary Grades; Reading; *Reading Achievement; Reading Development; Reading Improvement; *Reading Instruction; *Reading Skills; *Teaching Techniques

ABSTRACT

Reading instruction should be modified to make it compatible with students' perceptual skills. Assessing the adequacy of a student's perception is pertinent to planning his reading instructional program--not because the teacher can then teach to a preferred modality but, rather, because it can help the teacher determine whether the student has acquired the basic skills that are assumed by the particular instruction program that is to be used in the classroom. Some suggestions that teachers should follow for teaching reading to children with substandard perceptual skills include: only capital letters should be used until the student has acquired some degree of reading fluency; modify the text by adding a distinctive cue to potentially confusing letters; "b" and "d" should not be taught in juxtaposition; instruct the student to use his finger as a pointer, pointing to each word as he reads; teach the student that the start of a new sentence is signaled by a capital letter and the end by a period; introduce only a few sentences at first; for students who exhibit a deficit in auditory perception, phonics based instruction is needed; and teach the student to repeat what he has heard and wants to remember. (WR)

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ADAPTING PRIMARY GRADE READING INSTRUCTION TO INDIVIDUAL DIFFERENCES IN PERCEPTUAL SKILLS

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Jerome Rosner

Learning Research and Development Center

University of Pittsburgh

This paper was presented at the 1973 meeting of the College Reading Association

The research reported herein was supported by the Learning Research and Development Center, supported in part by funds from the National Institute of Education (NIE), United States Department of Health, Education, and Welfare. The opinions expressed in this publication do not necessarily reflect the position or policy of NIE and no official endorsement should be inferred.

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Jerome Rosner

Learning Research and Development Center
University of Pittsburgh

The variance in elementary school children's reading abilities can be related to many factors; for example, to the students' general intelligence and motivation, as well as to the nature of the instructional program and the environment of the classroom where it is implemented. Still another reported source of that variance is the level of competency of the students' perceptual skills (Rosner, 1973); that is, the degree to which they can identify and plot the interrelationships of the constituent parts of spatial and acoustical constructs. This paper deals with the relationships between perceptual skills and reading achievement, and how reading instruction can be modified to be compatible with students' perceptual skills.

The literature already contains a number of statements regarding why and how to choose an instructional program that accommodates specific perceptual deficits. Wepman (1971), for example, asserts that "educational programs should be developed to suit the modality (visual or auditory) of preference of the child." This opinion is shared by Van Camp (1971) who urges that one should teach "to the favored mode." The thesis seems to be reasonable and has many supporters; but, there are dissenters also--those, for example, who insist that "modality preference is not a significant factor" (Jones, 1973), and need not be examined.

This paper supports neither camp. It will argue that assessing the adequacy of a student's perceptual skills is indeed pertinent to planning his reading instructional program; not because the teacher can then teach to a "preferred" modality but, rather, because it helps the teacher determine whether the student has acquired the basic skills that are assumed by the particular instructional program that is to be used in that classroom. If the student has acquired these basic processes, and if the instructional program is valid, he is likely to learn from it. If the student has not acquired the appropriate prerequisite skills, the instructional program is apt to be ineffective and, even worse, frustrating.

This line of reasoning is based upon the following premises:

1. Beginning reading programs vary significantly in the amount of information that is made explicit to the student through overt instruction, as contrasted with what it is assumed that the student already knows or will readily induce from the lessons. To some degree, this can be a function of the sequence followed in teaching the subcomponents of reading. However, it appears to be mainly attributable to the fact that some instructional programs tend to teach a multitude of concepts or "rules" while others depend more upon providing situations that will foster the student's "discovery" of the rules. (A "rule," in this context, refers to a "structure by which an individual is directed or directs himself to look at the relevant features of what might otherwise be an unorganized task situation" [Glaser, 1973; p. 559].)

2. Students vary significantly in the degree to which they can induce the general principles of the reading process from a limited set of experiences in a limited amount of time. Some students can induce much from minimal exposure; others induce little and/or slowly--learning only as a result of explicit instruction, or prolonged exposure, or both.

3. The extent to which the basic information must be explicitly taught is, at least in part, a function of the student's perceptual skills. The student with adequate perceptual skills can, by definition, readily recognize the salient features of a sensory (auditory or visual) array. As such, he is likely to observe circumstances that tend to reoccur in a variety of situations which, in turn, leads him to discovering a rule. The student who does not readily recognize the salient features of a sensory array is not apt to discover anything; he will probably be too busy organizing the basic auditory and visual stimuli of an instructional situation to have the opportunity to identify higher order relationships among the stimuli.

4. It is the teacher's responsibility to reduce, as much as possible, any mis-matches between the perceptual skills that are assumed by the instructional program and those skills that the student can actually display. Hence, as a rule-of-thumb, the student with substandard perceptual skills should be taught in a way that recognizes his inadequacy; that provides him the information he lacks and, because of his perceptual deficit, is not likely to discover on his own. In contrast, as noted above, the student with better-than-average perceptual skills is likely to induce much information from appropriately designed learning situations and, as such, should be offered an instructional program that provides these conditions, avoiding the presentation of redundant and/or unnecessary information--information that the student already knows or will readily discover without overt assistance.

The value of assessing a student's perceptual skills, therefore, lies in the data it supplies the teacher regarding the extent to which a particular instructional approach may or may not match a student's ability to recognize the salient facts embedded in a specific learning experience

without having them overtly taught. Identifying a "preferred" modality is of little value, and indeed may even have negative effects, in that it focuses attention on irrelevancies and not on the behaviors that are central to learning to read. At the risk of oversimplifying, it may be said that matching an instructional approach to a student's perceptual skills merely acknowledges that some students will have to be taught, while others learn without a great deal, if any, overt teaching. (Although there will be no discussion, in this paper, about the advisability of attempting to teach students the necessary perceptual skills in lieu of modifying an instructional approach, it is a feasible option under certain circumstances; extended discussion regarding this may be found in Rosner, 1971a; 1972; 1973.)

What is "reading?"

Reading has been defined in various ways. This paper accepts Venesky's (1972) definition: "Reading is the translation from writing to a form of language from which the reader is already able to derive meaning" (p. 1). Based on that definition, learning to read appears to involve the following sets of operations:

1. Visual fixations and saccades. For a sighted person to read, he must align his eyes on an appropriate place in the text long enough to attend to a segment of a line of print. Once this has been accomplished, the reader shifts his gaze, in a rapid, jerky movement, to the next fixation point in the text. This jerky movement is known as a saccade. Once again, a certain amount of the text is attended to, then another saccade, another fixation, and so on. When the reader reaches the end of a line of print, he must execute another saccadic movement--this time to the left--and start again at the beginning of a new line of print.

2. Decoding. This pertains to the mapping of sounds on an array of letters, such as when blending a string of phonemes, or a collection of phonemes and linguistic units, into words; or as when learning whole "sight" words. In each of these instances, decoding involves reconstituting the sounds that the letters represent; the different circumstances are simply based on the unit of tranlation, ranging from the single phoneme to a complete sight word that may be quite long and complicated. In other words, reading "cat" as three sounds that must be blended, and reading "cat" as a total word that displays a specific visual configuration, are both examples of decoding.

3. Remembering the individual words, as they are decoded, long enough to accumulate a meaningful unit of information. Reading individual words, albeit meaningfully, does not fulfill the definition of reading cited above. Unless the appropriate number of words are "chunked" or compiled into larger units of information, it will probably be impossible for the student to comprehend the text. Indeed, it is not important, in most instances, that the individual words be recalled precisely. Most teachers have observed a child read "home" for "house." Technically, this may be viewed as a decoding error, but it is obvious that the child can "translate writing to a form of language from which the reader is already able to derive meaning" and, as such, can be judged to be "reading."

Interdependency of these operations

Obviously, these three sets of operations are interrelated. It is impossible to conceive of a competent reader, as defined by the last of the above listed skills, who cannot also display equal competency in the other two operations. It is also evident that, to a great extent, the interrelationships are hierarchical. That is, the student must be able to

fixate and perform saccades to some degree in order to be able to decode, and he must be able to decode to some degree before he can start to assemble meaningful units of information. Lucas (1972), in her investigation of the process of reading, offers evidence to support the assumptions of this three-stage linear model, identifying the three as a "visual encoding stage," an "acoustical encoding stage," and a "semantic matching stage" (p. 59).

This does not infer, however, that the beginning reader must achieve complete competency at one level of operations before some performance can be observed in the next. This is not so. Rarely do students, entering school, have to be taught how to fixate and perform a saccadic eye movement. It is something that almost every child can do long before that time. Rather, they have to be taught the "left-to-right principle by which words are spelled and put in order in continuous text" (Carroll, 1972; p. 6). In other words, they have to learn to fixate and perform saccades in the context of reading. As such, it is evident that the student's ability to control his eye movements appropriately is closely tied to his familiarity with the environment--the printed page--where these eye movements are to take place. Therefore, as a student becomes able to display some rudimentary competency in performing fixations and saccades that are consistent and correct in their directional flow, it is an indication that he has acquired facility in this set of operations sufficient to attempting to decode in some limited amount; and as a student acquires a repertory of relatively simple words that he can decode, his ability to control his eye movements for reading will improve because the printed page will start to appear as a relatively organized collection of words rather than a somewhat random array of letters. This, in turn, will improve his decoding skills, and so on. The same effect can be noted

at the next level of operations. As Venesky (1972) has observed, "the reliance on letter-sound generalizations in word recognition slowly decreases as word identification ability increases, and the competent reader probably makes little use of them in normal reading" (p. 12). Samuels and Dahl (1973), in their discussion of "automaticity" in reading, also note this when they point out that once a reader achieves fluency, he devotes little attention to decoding while reading, and that "only when a new word appears is the reader's attention directed back to the task of decoding" (p. 5).

Thus, in a behavioral sense, the three sets of operations listed above may be conceived of as nested; each higher level operation, as it is mastered, absorbing those of lower order, and each of the lower order ones supporting the higher level ones. With practice, each of the lower order operations tends to require less energy and time--becoming increasingly automatic as it merges with the higher level operations. This is essential to achieving capable reading skills. Persistent inefficient function in a lower level of operations will significantly impede higher level processes.

What are perceptual skills?

Perceptual skills were defined above as "the degree to which the student can identify and plot the interrelationships of the constituent parts of spatial and acoustical constructs." More explanation would probably be helpful.

The constituent parts of a spatial pattern are the objects, the lines, or whatever else forms the basis for the pattern. Visual perceptual skills, therefore, are those abilities that enable the child to analyze a pattern into a finite number of concrete elements and plot the way those elements interrelate.

The constituent parts of an acoustical pattern are the sounds--the spoken phrases, words, syllables, phonemes--or whatever else forms the sensory basis for the spoken language. Auditory perceptual skills are those abilities that enable the child to analyze the acoustical patterns of spoken language into a finite number of concrete elements and plot the way those elements interrelate--sequence.

The adequacy of a child's perceptual skills are defined by (a) the facility with which he performs the component analyses of sensory patterns; (b) the size of the units of analyses; and (c) the discreteness of the spatial or temporal map on which he plots the interrelationships of the constituent parts.

For example, visual perceptual skills may be assessed reliably by a variety of geometric design copying tests (e.g., Starr, 1961; Bender, 1938; Rosner, 1971b). In no instance is the geometric design itself the relevant factor; rather it is the complexity of the pattern that is important--the number of elements contained within that pattern and the way those elements interrelate.

Auditory perceptual skills may be assessed reliably by a test that requires the child to analyze phrases into words, words into syllables, and syllables into phonemes (Rosner & Simon, 1971). Again, it is not the pattern--the word(s)--that is relevant. It is the complexity of the acoustical pattern; the number and size of the phonological elements and the way they interrelate.

How are perceptual skills related to school achievement?

Though they vary markedly, all children enter school with some store of linguistic and pictorial information that has been acquired during

their pre-school years. The vast majority of these children, however, lack the capacity to deal with this information symbolically; that is, to represent it with letters and numerals.

That, in fact, is one of the two major initial goals of the school: (a) to teach primary grade children how arrays of letters can be used to represent quantities and spatial relationships, and (b) to assist the children in expanding their store of linguistic and pictorial information.

The interaction between the two goals is apparent; each supports the other. As a child learns to deal with symbols, he gains access to a vast amount of information which, in turn, enhances further his capacity to translate symbolically represented information.

How does this pertain to perceptual skills? It has already been noted that the value of perceptual skills is that they enable the child to analyze spoken words and spatial patterns into their respective constituent parts. Symbols code these constituent parts; letters for sounds, numerals for spatial elements and relationships. If a child's perceptual skills are substandard--if he encounters difficulty in analyzing sensory patterns into their structural elements and recognizing their interrelationships--he must, by definition, encounter serious confusion in learning the symbolic coding procedures used in reading and mathematics because he will not have ready access to that which is to be coded--the constituent parts. It is important, but insufficient, for the child to "know" the symbols; the child must also "know" what the symbols are supposed to represent. Knowing half of a code is of little value.

The relevance of visual perceptual skills in learning to read

As already observed, reading requires the student to fixate visually at an appropriate place in the text long enough to attend to some portion of that text, and then to move his eyes to the next visual fixation position. The beginning reader deals with very small segments of text in any single fixation; he rarely attends to more than one word at a time and often finds it necessary to focus on even smaller units than that. Thus, he must perform a relatively large number of fixations and saccades as he reads a page of print; indeed, as he reads each line of print.

Each saccade involves a certain amount of risk; just as one is always in danger of getting his feet wet when he tries to cross a stream by jumping from stone to stone, so too does the beginning reader continually risk losing his place as his eyes "leap" from one fixation point to another. This is particularly so with young readers who have not acquired competent visual perceptual skills, given that such skills enable them to sort and order--to analyze and organize--both the visual space in which they are working and the various letters that are displayed within that space.

The child with competent visual perceptual skills can, by definition, analyze the printed text into its component parts; words, letters within words, and in the early stages, shapes within letters. Because of this facility in spatial analyses, he is likely to learn the letters with little difficulty. Thus, the printed text will appear orderly, comprised of a finite number of elements, each of which has a logical relative position within the total pattern. Fixations and saccades, under such conditions, are not very demanding acts; the likelihood of the student going astray is not great--his path is well defined.

Now consider the beginning reader with substandard visual perceptual skills. To him, the printed text may very well appear to resemble a disordered array of an indeterminite number of graphic elements, none of which seem to have a fixed relative position within the total pattern. Consider a situation that would be analogous for adults. Imagine fixating a single blade of grass in a healthy lawn, then shifting to the next, and the next, and so on, in an orderly pattern. Difficult? Probably impossible!

In a sense, this is the task that faces children in a beginning reading class, whose visual perceptual skills are substandard. Little wonder that they readily "lose their place" on the page, mistake one letter for another, read from right to left, and so on. "Mirror vision?" "Seeing up-side-down?" Not so! True, some children do tend to print or read words backwards, but never <u>all</u> words. Certainly, children with significant visual perceptual skills deficits are often confused about direction; they have not yet acquired sufficient skills to order appropriately the array of letters that comprise the text. It is reasonable that they "lose their way"--get disoriented--upon occasion. But, literally, "seeing backwards?" Hardly!

Thus, visual perceptual skills appear to relate to learning to read in two main ways: (a) as children's visual perceptual skills approximate an adequate level, they are less apt to confuse letters that closely resemble each other, or become disoriented on the printed page; (b) as facility continues to be acquired, as the visual perceptual process becomes more automatic, it will be observable in the child's higher order processes of decoding, and extracting and relating information. Clearly desirable achievements.

The relevance of auditory perceptual skills in learning to read

Given competent auditory perceptual skills, the beginning reader, having learned the word "cat," for example, will recognize that it is comprised of a string of three different letters and three different sounds, and that these same letters appear in other words, very often representing the same sounds as they do in the word "cat" (although, unfortunately, they do not represent the same sounds as consistently as one would wish). As these insights are gained, the process of decoding becomes more logical and, hence, more learnable. Each new word need not be taught as a new "sight" word; nor, on the other hand, is it necessary to teach each phoneme-grapheme rule.

The child who can effectively analyze a spoken word into its individual sounds is likely to induce many of the sound-symbol rules. For example, the beginning reader with competent auditory perceptual skills, having learned certain sight words that are similar in an important way (e.g., "mother"; "man"; "sam") is apt to induce the sound-symbol rule for the letter "m" with little, if any, overt instruction. Indeed, he may very well also induce the rule for the short /ă/ sound that occurs in two of the three words. There is little likelihood, however, that the child with substandard auditory perceptual skills will experience these insights; the related salient characteristics of the three words would not be obvious to him.

It seems apparent, therefore, that auditory perceptual skills are relevant to learning to read in that the more competent the student's ability to analyze spoken language into discrete units--the more familiar he is with the acoustical elements of the reading code--the more apt he is to learn to read, regardless of instructional system. The less adequate the student's auditory perceptual skills, the more important it

becomes to modify the instructional approach by providing for what he cannot do; in this instance, analyze spoken words into their structural elements.

Guidelines for making adaptations

Later in this section, specific suggestions will be listed for modifying reading instruction to be compatible with a student's perceptual skills. First, it is important to identify the general principles that underlie these suggested modifications.

Up to now, this paper has dealt with the processes of reading from the basis of the questions: "How does a child learn to read? What skills are acquired, and how are they displayed?" One viewpoint has been expressed and supporting opinions have been cited. It is now crucial that we ask a second question: "Based on what has been presented, how can we best teach children to read, acknowledging that they display significant differences in certain fundamental processes--perceptual skills?" Glaser (1973) clarifies the distinction between the questions posed above when he states, "while we usually have thought in terms of fitting learning to how knowledge is organized, we need also to think in terms of organizing knowledge to fit learning" (p. 559). In other words, we now have to ask a teacher's question, "How can this child best be taught?"; not, a psychologist's question, "What are the ways children learn?"

The primary goal of this section is to focus on the teacher's question by proposing the following guidelines:

1. The critical process that must be taught in the classroom is decoding. Certainly, the students must know the words they are reading and be able to deal with the information represented by those words, but

these abilities are not directly related to perceptual skills nor, for that matter, are they the concern of the reading teacher exclusively. Besides that, it is obvious that there are many children who do know the words and can deal with the information expressed by the words, yet cannot read satisfactorily; clearly, there are no children who can read satisfactorily, yet do not know the words and are unable to deal properly with the information expressed by the words. This latter is ruled out by the definition of reading that was stated at the beginning of this paper: "the translation from writing to a form of language from which the reader is already able to derive meaning" (Venesky, 1972). (This does not imply that the teacher should not teach vocabulary as well as comprehension skills. It merely accepts the fact that most beginning readers do know the vocabulary in their first readers and can interpret the language of those readers. Therefore, these factors should not prevent them from getting started in a reading program, thus acquiring the most efficient way to learn more words and to deal with more complex thoughts--through reading.)

Insofar as visual fixations and saccades are concerned, we have already argued that, to a great extent, these skills must be viewed from the setting in which they are performed, and that minimal eye movement skills are sufficient for beginning decoding, which will then facilitate the acquisition of improved eye movement skills, and on, and on. Teaching eye movement skills out of the context of reading is unjustified, if not simply foolish, if the concern for these skills is as they relate to reading. So, to repeat, the critical process that must be taught in the classroom is decoding.

2. Adapting instruction in accord with a student's perceptual skills primarily involves teaching explicitly what has to be taught, and providing the supports--in the way of prompts, cues, and so forth--that are

needed to assist the student in responding appropriately to the instructional situations. Stated another way, perceptual skills are those processes that enable the student to recognize the salient features of a lesson and the way those features may interrelate. Many lessons are constructed with the assumption that the salient features will be apparent to the student, yet the lesson does not overtly point them out, nor attempt to instruct the student how to recognize them. Therefore, if a student's perceptual skills are such that he does not recognize--"see" or "hear"--what is salient in a particular lesson, it is his teacher's responsibility to point it out clearly and, using whatever supports are effective, assist the student in applying the information in that lesson.

Many educators tend to view supports negatively--as "crutches"; devices to be avoided at all costs. This is an unprofitable--indeed, defeating--position for a teacher to take. It is generally wiser to supply as much support as is needed, and eliminate it gradually as learning occurs.

3. Support is generally available from two main sources; the student himself, and the teacher. That is:

(a) The student may be taught (or, perhaps, merely allowed) to process the information contained in an instructional situation in a way that is often judged to be inappropriate for students beyond the beginning reader level. Specifically, this refers to the support that tangible contact offers in confirming the intangible sensations of light and sound. For example, manual contact (touching) offers tangible support in a visual task; vocalization (saying) in a listening task.

(b) The teacher may modify the instructional situation by performing some, or all, of the analysis and organization functions for the student, and/or lengthening the time available to learn a specific skill. In other words, the teacher may break the instructional task down into a sequentially presented series of small tasks, making apparent what is salient in each situation and/or allowing the student extended time to practice the task to the point of "over-learning."

Hence, these underlying principles relate directly to a rule-of-thumb stated early in this paper. Namely, reduce, as much as possible, any apparent mis-matches between what the student can actually do and what the instructional situation assumes he can do; this, by making changes in the instructional situation rather than by demanding them, unreasonably and impossibly, from the student.

Adaptations for visual perceptual skills deficits

The following are suggestions based on the guidelines stated above. In each instance, they advise (a) the teacher not to assume that the child can "see" what is salient; (b) the elimination of as many potential ambiguities and other sources of confusion as possible; (c) the provision of overt guidance and support for the child, wherever needed; (d) the availability of time for the child to assimilate basic skills to the point where they are not apt to be readily forgotten. On the other hand, this is not to be interpreted as meaning that the student should not progress in his reading studies until he is perfect at some lower level. He should progress at a rate that allows him to practice earlier learned skills at a slightly higher

level, demonstrating that he understands basic concepts, despite an occasional error.

It is not assumed that all suggestions will be implemented in a single situation. In fact, this could not happen since some are alternatives for others:

1. Use only capital letters until the student has acquired some degree of reading fluency.

2. Modify the text by adding a distinctive cue to potentially confusing letters such as the lower case "d", or the lower case "b". Do not cue both; choose one and stay consistent. The cue may be a line beneath the letter, a colored "wash" over the letter, etc.

3. Do not use more than one or two cues until you are sure that more will not cause confusion.

4. Do not teach the "b" and the "d" in juxtaposition.

5. Add cues (to new letters) only when the student can demonstrate that the first ones are firmly established. This implies that the teacher avoid instructional systems that use something other than traditional orthography or that introduce a great many color cues at one time.

6. Systems that use only a limited number of diacritical markings can be very effective.

7. Instruct the student to use his finger as a pointer, pointing to each word as he reads it. He is much less likely to lose his place under such circumstances.

8. It may also be helpful to have the student trace over letters (large ones, of course) with his finger in order to make more apparent

the difference between certain similar pairs. (Sand paper letters may be used, but they are rarely necessary.)

9. Having the student print letters while his eyes are closed is also worthwhile for those who display difficulty remembering the letters.

10. Draw a colored vertical line down the left hand side of every reading page, thus providing the student with a point of reference in terms of direction. Instruct him of its purpose--he is always to start reading at the side where the line is and proceed across the page away from it.

11. Teach the student that the start of a new sentence is signaled by a capital letter and the end by a period.

12. Have the student draw pictures based on a story, or a paragraph, or a sentence that has just been read. This is likely to improve retention and comprehension.

13. It may also be helpful for the student to "visualize" what he has read and describe that image verbally.

14. Seek out uncluttered workpages. Organize cluttered pages by encircling certain portions of the page and obscuring other sections.

15. Do not assume a skill until the student has demonstrated it.

16. In discussing a story (or paragraph or sentence) ask questions that are direct and tend to facilitate the student's capacity to segment the story into a series of interrelated events.

Adaptations for auditory perceptual skills deficits

The following suggestions are based on the same principles as were applied in the list for visual perceptual deficits. To review briefly, these were (a) do not assume that the child can "hear" what is salient,

(b) eliminate ambiguities, (c) provide overt guidance and support, (d) provide time for practice.

Again, it is not assumed that all suggestions will be implemented in a single situation.

1. As a general rule, the greater the deficit in auditory perceptual skills, the greater the need for a structured, phonics based instructional program.

2. Introduce only a few sounds at first. When these have been well learned, introduce additional sounds. Attempt to teach via regular words (that is, words that are spelled as they sound).

3. Use a few (and only a few) cues to help the student recall certain hard-to-remember sounds (e.g., short vowel). Key words (ă̆pple, ĕ̆skimo, ĭ̆gloo, ŏ̆ctopus, ŭ̆mbrella) and diacritical markings are suitable cues.

4. Instruct the student to <u>say</u> the sounds (and words) as he reads them and to think about how his mouth "feels." This procedure can be particularly useful in helping the student analyze the sequence of sounds in a word.

5. Instructional systems that use an expanded alphabet (e.g., ITA) can be effective <u>if the student's visual perceptual skills are at least satisfactory</u>.

6. Recognizing the difference between two words, in terms of their beginning (or ending) consonant sound is not sufficient evidence that the student <u>knows</u> the sounds. Use tasks that require him to analyze the sounds and produce them himself. That is, to make apparent a sound embedded in a word, analyze the word to explicate the sound. (This technique is fully described as Auditory Analysis in Rosner, 1972.)

7. Do not teach similar sounds in juxtaposition. Teach one to some level of competency before introducing the other (e.g., /f/ and /th/).

8. Present sounds in rhyming contexts. It tends to make them more apparent.

9. Speak to the child in short, well-constructed sentences. Avoid long, multiple-part sentences.

10. Teach the student to repeat (rehearse) what he has heard and wants to remember.

11. Have the student watch your mouth (or his own in a mirror) as he hears the sounds in spoken words.

12. Once a student can decode all of the words in a sentence, have him re-read the sentence as a unit of information. Comprehension will occur only when this can be done. Reading word-by-word is insufficient.

Postscript

The above sections have listed some suggestions for teaching children with substandard perceptual skills. A few words should be devoted to the other child--the student whose skills are adequate or better.

The argument has been made that capable perceptual skills enable the student to recognize the salient visual and acoustical features of a given instructional situation. Hence, he will learn more from an instructional experience because less will have to be taught overtly; he will induce certain rules on his own. The simplistic statement was made, relevant to this, that some students will have to be taught, while others learn. Should there be any concern devoted to this latter group? Yes. If the

generalizations made in this paper are valid, this latter group will learn under practically all reasonable circumstances, but they will learn best under conditions that exploit their capacities, albeit benignly.

Suggestions will not be listed for this group, nor is the reader to assume that they need only to do the opposite of what was suggested in the lists for those children with significant perceptual deficits. Rather, the rule-of-thumb to be followed with this group is very similar to what was stated above: (a) do not make assumptions, (b) eliminate ambiguities, (c) provide overt guidance and support, (d) provide time for practice. All that needs to be added to this list is the statement "until you are reasonably certain that such precautions are unnecessary." In other words, the reason these principles apply for children with substandard perceptual skills is because the students need their application if they are to learn appropriately. When a student can display that such precautions are no longer necessary, they may be dispensed with.

In summary, a teacher is one who teaches--who creates circumstances that will result in students' learning. Students vary, and a teacher will adapt to those variations and accept all of the responsibilities that this implies.

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